

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 01-131675

(43)Date of publication of application : 24.05.1989

(51)Int.Cl.

A61N 5/10

(21)Application number : 62-288495

(71)Applicant : MITSUBISHI ELECTRIC CORP

(22)Date of filing : 17.11.1987

(72)Inventor : NISHIHARA SUSUMU
UEDA KAZUHIRO

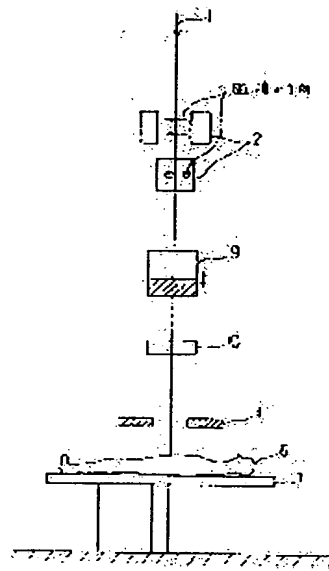
(54) APPARATUS FOR CURING CANCER WITH CHARGED PARTICLE RAYS

(57)Abstract:

PURPOSE: To use a radiotherapy equipment without replacing a ridge-filter and a bolus for each patient, by providing a range-shifter for varying energy of charged particle rays and a collimator for varying the shape of a plane perpendicular to the orbit and by three-dimensionally radiating charged particle rays according to the shape of a patient.

CONSTITUTION: Energy of charged particle rays 1 made round and flat by a scanning electromagnet 2 is varied with a range-shifter 9. The range-shifter 9 is a plurality of boards made of: e.g., water, salt water, another liquid or copper, and makes energy of the charged particle rays 1 decrease corresponding to the thickness thereof.

Radiation energy can thus be varied without the variation of energy of an accelerator. A lesion is three-dimensionally and thus efficiently irradiated with radioactive rays by combination of the range-shifter 9 and a multi-collimator 4. The position for radiation in depth is adjusted with the range-shifter 9 and the shape of a plane perpendicular to a beam axis is freely varied with the multi-collimator.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's]

decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office